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NEWS HOURS STN Operating Hours Plus Help Desk Availability

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FILE 'HOME' ENTERED AT 15:14:09 ON 20 JUN 3

=> file req

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.30 0.30

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 15:15:04 ON 20 JUN 1999 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 1999 American Chemical Society (ACS)

STRUCTURE FILE UPDATES: 18 JUN 99 HIGHEST RN 225531-94-2 DICTIONARY FILE UPDATES: 19 JUN 99 HIGHEST RN 225531-94-2

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 13, 1999

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=> s benzothiophen?/cn

L1

32 BENZOTHIOPHEN?/CN

=> s clomiphene?/cn

L2 6 CLOMIPHENE?/CN

=> s danazol?/cn

L3 4 DANAZOL?/CN

=> s levonorgestrel?/cn

L4 34 LEVONORGESTREL?/CN

=> file medline, uspatfull, hcaplus

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 15.10 15.40

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 15:16:35 ON 20 JUN 1999

FILE 'USPATFULL' ENTERED AT 15:16:35 ON 20 JUN 1999 CA INDEXING COPYRIGHT (C) 1999 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'HCAPLUS' ENTERED AT 15:16:35 ON 20 JUN 1999 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 1999 AMERICAN CHEMICAL SOCIETY (ACS)

=> s 11 or 12

L5 5917 L1 OR L2

=> s contracepti? or coc#

L6 94627 CONTRACEPTI? OR COC#

=> s 15 (p) 16

L7 14 L5 (P) L6

=> s 17 (p) (13 or 14)

L8 1 L7 (P) (L3 OR L4)

=> d bib 18

L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 1999 ACS

AN 1977:37944 HCAPLUS

DN 86:37944

TI GPC diesterase activity in human endometrial secretion. (Its variations under the action of estrogens, clomiphene citrate, D-norgestrel (post-coital and low dose) and intrauterine device (IUD))

AU Nicholson, Roberto; Calamera, Juan C.

CS Fac. Med., Univ. Buenos Aires, Buenos Aires, Argent.

SO Int. J. Fertil. (1976), 21(3), 177-80 CODEN: INJFA3

DT Journal

LA English

=> d bib, ab, kwic 18

L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 1999 ACS

```
1977:37944 HCAPLUS
AN
     86:37944
DN
    GPC diesterase activity in human endometrial secretion. (Its variations
ΤI
     under the action of estrogens, clomiphene citrate, D-norgestrel
     (post-coital and low dose) and intrauterine device (IUD))
     Nicholson, Roberto; Calamera, Juan C.
ΑU
CS
     Fac. Med., Univ. Buenos Aires, Buenos Aires, Argent.
     Int. J. Fertil. (1976), 21(3), 177-80
so
     CODEN: INJFA3
DT
     Journal
LΑ
    English
    Glycerylphosphorylcholine diesterase [9025-85-8] activity was studied in
AB
     human uterine secretions of normal women and in those under treatment for
     sterility or contraception. Endometrial secretions were
     obtained from 78 patients and the material divided into 4 groups: normal
     women; treated with estrogens alone or with clomiphene citrate [
     50-41-9]; treatment with D-norgestrel (I) [797-63-7]
     (daily and postcoital); and patients with IUD Lippes D. The mean conc.
οf
     free choline liberated by the diesterase in the normal group was 777
     .mu.g/mL. Under hormonal treatment an increase of diesterase activity
was
     obsd. Postcoital I decreased the enzymatic activity between 180 to 420
    min. The uninterrupted use of I (30 gammas daily) produced a loss of
    diesterase activity in 80% of cases studied. The use of an IUD (Lippes
D)
    did not modify the enzymatic activity.
     . . diesterase [9025-85-8] activity was studied in human uterine
AΒ
     secretions of normal women and in those under treatment for sterility or
     contraception. Endometrial secretions were obtained from 78
    patients and the material divided into 4 groups: normal women; treated
    with estrogens alone or with clomiphene citrate [50-41-9];
     treatment with D-norgestrel (I) [797-63-7] (daily and
     postcoital); and patients with IUD Lippes D. The mean conc. of free
     choline liberated by the diesterase in.
=> s 17 and (13 or 14)
            2 L7 AND (L3 OR L4)
=> d 19 1-2
    ANSWER 1 OF 2 HCAPLUS COPYRIGHT 1999 ACS
L9
    1984:168449 HCAPLUS
AN
     100:168449
DN
    The effect of sex steroids and hormonal contraceptives upon thymus and
TТ
     spleen of intact female rats
     Kuhl, H.; Gross, M.; Schneider, M.; Weber, W.; Mehlis, W.; Stegmueller,
ΑU
    M.; Taubert, H. D.
    Abt. Gynaekol. Endokrinol., J. W. Goethe-Univ., Frankfurt/Main, D-6000,
CS
     Fed. Rep. Ger.
     Contraception (1983), 28(6), 587-601
SO
     CODEN: CCPTAY; ISSN: 0010-7824
DT
     Journal
    English
LΑ
    ANSWER 2 OF 2 HCAPLUS COPYRIGHT 1999 ACS
L9
    1977:37944 HCAPLUS
AN
     86:37944
DN
     GPC diesterase activity in human endometrial secretion. (Its variations
ΤI
     under the action of estrogens, clomiphene citrate, D-norgestrel
     (post-coital and low dose) and intrauterine device (IUD))
    Nicholson, Roberto; Calamera, Juan C.
ΑU
```

Fac. Med., Univ. Buenos Aires, Buenos Aires, Argent.

CS

```
Int. J. Fertil. (1976), 21(3), 177-80
SO
     CODEN: INJFA3
DT
     Journal
LΑ
     English
=> d bib, ab, kwic 19 1
    ANSWER 1 OF 2 HCAPLUS COPYRIGHT 1999 ACS
L9
     1984:168449 HCAPLUS
ΑN
DN
     100:168449
     The effect of sex steroids and hormonal contraceptives upon thymus and
TΙ
     spleen of intact female rats
     Kuhl, H.; Gross, M.; Schneider, M.; Weber, W.; Mehlis, W.; Stegmueller,
UΑ
    M.; Taubert, H. D.
    Abt. Gynaekol. Endokrinol., J. W. Goethe-Univ., Frankfurt/Main, D-6000,
CS
     Fed. Rep. Ger.
     Contraception (1983), 28(6), 587-601
SO
     CODEN: CCPTAY; ISSN: 0010-7824
     Journal
DΨ
     English
LA
    The effect of chronic treatment of intact adult female rats with sex
AB
     steroids and contraceptive prepns. upon the thymus and the spleen was
     investigated. Daily injections with 10 .mu.g ethinylestradiol
[57-63-6],
     estradiol [50-28-2] or diethylstilbestrol [56-53-1] for 2 wk resulted
in
     a marked but reversible involution of the thymus, but the spleen was not
     affected. Androgens exerted an effect at a dose of 0.3 mg, and
    progestogens only when 2 mg were given. When various contraceptive
    prepns. were injected for 4 wk, there was a total involution of the
thymus
    which persisted even 2 wk after cessation of treatment. The effect
     appeared to be mainly due to the estrogenic component. Histol. examns.
     revealed that estrogen treatment alone resulted in a redn. of the cortex
     and a depletion of lymphocytes. When contraceptive prepns. were
     administered, the medulla was also reduced, and both cortex and medulla
    were replaced by reticular and adipose tissue. The estrogen receptors of
     thymus cytosol showed dissocn. consts. of 0.34-0.49 nM in diestrous rats,
    progesterone-treated rats and ovariectomized rats, and binding capacities
    of 6.5-2.6 fmoles/mg protein. Whether the estrogen-induced involution of
     the rat thymus leads to an impairment of immune responses remains to be
     shown.
    52-76-6
               68-22-4 797-63-7
                                  1961-77-9
                                              54024-22-5
TΨ
    RL: BIOL (Biological study)
        (spleen and thymus gland response to, estrogens in relation to)
     50-23-7
               50-28-2, biological studies
                                             56-53-1 57-63-6
IT
                                    520-85-4 911-45-5
    biological studies
                          58-22-0
                                                        1424-00-6
    2098-66-0
                 10540-29-1
    RL: BIOL (Biological study)
        (spleen and thymus gland response to, oral contraceptives in
        relation to)
=> d his
   (FILE 'HOME' ENTERED AT 15:14:00 ON 20 JUN 1999)
     FILE 'REGISTRY' ENTERED AT 15:15:04 ON 20 JUN 1999
            32 S BENZOTHIOPHEN?/CN
L1
L2
              6 S CLOMIPHENE?/CN
L3
              4 S DANAZOL?/CN
```

FILE 'MEDLINE, USPATFULL, HCAPLUS' ENTERED AT 15:16:35 ON 20 JUN 1999

34 S LEVONORGESTREL?/CN

L4

```
5917 S L1 OR L2
L6
          94627 S CONTRACEPTI? OR COC#
L7
             14 S L5 (P) L6
L8
              1 S L7 (P) (L3 OR L4)
L9
              2 S L7 AND (L3 OR L4)
=> s 15 and 16 and (13 or 14)
             9 L5 AND L6 AND (L3 OR L4)
L10
=> dup rem 110
PROCESSING COMPLETED FOR L10
              9 DUP REM L10 (0 DUPLICATES REMOVED)
=> d bib, ab, kwic 111 1-9
    ANSWER 1 OF 9 USPATFULL
ΑN
       1998:19743 USPATFULL
       Ovulation control by regulating nitric oxide levels
ΤI
IN
       Garfield, Robert E., Friendswood, TX, United States
       Yallampalli, Chandrasekhar, Houston, TX, United States
       Board of Regents, The University of Texas System, Austin, TX, United
PA
       States (U.S. corporation)
ΡI
       US 5721278 19980224
ΑI
       US 95-477187 19950607 (8)
       Division of Ser. No. US 93-165309, filed on 10 Dec 1993, now patented,
RLI
       Pat. No. US 5470847
DT
       Utility
      Primary Examiner: Criares, Theodore J.
EXNAM
      Arnold, White & Durkee
CLMN
       Number of Claims: 4
ECL
       Exemplary Claim: 1
       1 Drawing Figure(s); 1 Drawing Page(s)
DRWN
LN.CNT 556
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Inhibition of ovulation in a female may be achieved by administering a
       nitric oxide synthase inhibitor, alone or in combination with one or
       more of a progestin, an estrogen, and an LH-RH antagonist, thereby
       preventing conception. The stimulation of ovulation in a female may be
       achieved by administering a nitric oxide source, optionally in further
       combination with one or more of clomiphene, a gonadotropin, and an
LH-RH
               hypothalamus and some progesterone is required for stimulating
SUMM
       LH-RH. It is on the basis of this concept that the modern
     contraceptive "pill" is designed. Proqestins and estrogens in
       the "pill" inhibit the synthesis of LH-RH thus preventing the LH surge
      which.
       Female contraception methods are based upon the above theory
SUMM
       of the control of ovulation. Generally, all contraceptive
       procedures are based upon the principal that high or moderate
      progesterone or estrogen levels inhibit LHRH and the LH surge. . .
SUMM
       1. Oral contraception.
SUMM
       Potential users of these hormone contraceptives should be
       alerted to the fact that both hormone components may be associated with
       a slightly increased risk of cardiovascular.
      hypercholesterolemia, hypertension, diabetes, heavy smoking, or a
family
      history of early coronary disease may augment the risk. Discontinuance
       of oral contraceptives and use of an effective alternative
       should be considered in the management of hypertension or major glucose
       intolerance. Use of.
SUMM
      Absolute contraindications to oral contraceptives include
```

```
thrombotic disorders, known or suspected cancer of an
estrogen-dependent
       organ (e.g., breast or uterus), impaired liver function, pregnancy,
       undiagnosed. . . bleeding, pregnancy-associated jaundice, and
      hyperlipidemia. In many other disorders, a relative contraindication
       should be individually evaluated and use of oral contraceptives
      cautiously explored. Because the frequency of arterial thrombosis
       appears to be increased after elective surgery, it is recommended that
      oral contraceptives be discontinued a month before surgery.
       . . . example, an N.sup.G substituted arginine or arginine ester or
SUMM
      an N.sup.G, N.sup.G -disubstituted arginine which is administered to a
       female desiring contraception. The arginine analogues of the
      present invention are preferably of the L-configuration and include any
      pharmaceutically acceptable addition salts as. . .
         . . artificial insemination (AI) and other assisted reproductive
SUMM
      techniques. The inhibition of ovulation will block conception and be
      beneficial as a contraceptive. There is substantial need for
      medical intervention in ovulation control in women who either want to
       raise a family or.
              ovulation for the purpose of producing offspring or the
DETD
       inhibition of ovulation for the purpose of preventing conception and
      pregnancy (contraception).
      Fathalla, M. F., "Contraception and women's health," British
DETD
      Medical Bulletin, 49(1):245-251, 1993.
      Hannaford, P. C., "Cervical cancer and methods of contraception
DETD
       ," Advances in Contraception, 7:317-324, 1991.
      Jordan, V. C., et al., "The Estrogenic Activity of Synthetic Progestins
DETD
      Used in Oral Contraceptives, " Cancer, 71(4):1501-1505, 1993.
      Segal, S. J., "Trends in Population and Contraception," Annals
DETD
      of Medicine, 25:51-56, 1993.
      Szarewski, A. and J. Guillebaud, "Contraception," British
DETD
      Medical Journal, 1224-1226.
      50-28-2, 17.beta.-Estradiol, biological studies
                                                        50-50-0, Estradiol
IT
                55-63-0, Nitroglycerin 57-63-6, Ethinyl estradiol
      benzoate
57-83-0,
                                         68-23-5, Norethinodrel
                                                                  74 - 79 - 3,
      Progesterone, biological studies
      L-Arginine, biological studies 87-33-2, Isosorbide dinitrate
      434-22-0, 19-Nortestosterone 520-85-4, Medroxyprogesterone
    911-45-5, Clomiphene
                          2149-70-4
                                       6533-00-2, Norgestrel
                                                   14402-89-2, Sodium
                     9034-40-6D, Lh-rh, analogs
      9002-67-9, LH
                     16051-77-7, Isosorbide mononitrate
                                                           17035-90-4
      nitroprusside
                         20933-81-7
                                      34973-08-5, Gonadorelin
    17230-88-5, Danazol
               35189-28-7, Norgestimate
                                          50903-99-6
                                                        54024-22-5,
      acetate
Desogestrel
                                          74381-53-6, Leuprolide acetate
                   60282-87-3, Gestodene
      57444-72-1
      76932-60-0, Nafarelin acetate 125978-95-2, Nitric oxide synthase
      137361-05-8
        (ovulation control by regulating nitric oxide levels)
L11 ANSWER 2 OF 9 USPATFULL
       97:56710 USPATFULL
ΑN
       Ovulation control by regulating nitric oxide levels
ΤI
       Garfield, Robert E., Friendswood, TX, United States
IN
       Yallampalli, Chandrasekhar, Houston, TX, United States
      Board of Regents, The University of Texas System, Austin, TX, United
PA
      States (U.S. corporation)
      US 5643944 19970701
PΙ
ΑI
      US 95-477189 19950607 (8)
      Division of Ser. No. US 93-165309, filed on 10 Dec 1993, now patented,
RLI
       Pat. No. US 5470847
      Utility
DT
      Primary Examiner: Criares, Theodore J.
EXNAM
```

Arnold White & Durkee

Number of Claims: 3

Exemplary Claim: 1

LREP

CLMN ECL

```
1 Drawing Figure(s); 1 Drawing Page(s)
DRWN
LN.CNT 571
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The stimulation of ovulation in a female may be achieved by
AΒ
       administering a nitric oxide source, optionally in further combination
       with one or more of clomiphene, a gonadotropin, and an LH-RH agonist.
            . hypothalamus and some progesterone is required for stimulating
SUMM
      LH-RH. It is on the basis of this concept that the modern
    contraceptive "pill" is designed. Progestins and estrogens in
       the "pill" inhibit the synthesis of LH-RH thus preventing the LH surge
      which.
       Female contraception methods are based upon the above theory
SUMM
      of the control of ovulation. Generally, all contraceptive
      procedures are based upon the principal that high or moderate
      progesterone or estrogen levels inhibit LHRH and the LH surge. . .
SUMM
       1. Oral contraception.
      Potential users of these hormone contraceptives should be
SUMM
       alerted to the fact that both hormone components may be associated with
       a slightly increased risk of cardiovascular.
      hypercholesterolemia, hypertension, diabetes, heavy smoking, or a
family
      history of early coronary disease may augment the risk. Discontinuance
      of oral contraceptives and use of an effective alternative
       should be considered in the management of hypertension or major glucose
       intolerance. Use of.
SUMM
      Absolute contraindications to oral contraceptives include
       thrombotic disorders, known or suspected cancer of an
estrogen-dependent
       organ (e.g., breast or uterus), impaired liver function, pregnancy,
       undiagnosed. . . bleeding, pregnancy-associated jaundice, and
      hyperlipidemia. In many other disorders, a relative contraindication
       should be individually evaluated and use of oral contraceptives
      cautiously explored. Because the frequency of arterial thrombosis
      appears to be increased after elective surgery, it is recommended that
      oral contraceptives be discontinued a month before surgery.
               example, an N.sup.G substituted arginine or arginine ester or
SUMM
      an N.sup.G, N.sup.G -disubstituted arginine which is administered to a
       female desiring contraception. The arginine analogues of the
      present invention are preferably of the L-configuration and include any
      pharmaceutically acceptable addition salts as. .
         . . artificial insemination (AI) and other assisted reproductive
SUMM
      techniques. The inhibition of ovulation will block conception and be
      beneficial as a contraceptive. There is substantial need for
      medical intervention in ovulation control in women who either want to
      raise a family or.
       . . . ovulation for the purpose of producing offspring or the
DETD
      inhibition of ovulation for the purpose of preventing conception and
      pregnancy (contraception).
      Fathalla, M. F., "Contraception and women's health," British
DETD
      Medical Bulletin, 49(1):245-251, 1993.
      Hannaford, P. C., "Cervical cancer and methods of contraception
DETD
       ," Advances in Contraception, 7:317-324, 1991.
      Jordan, V. C., et al., "The Estrogenic Activity of Synthetic Progestins
DETD
      Used in Oral Contraceptives, " Cancer, 71(4):1501-1505, 1993.
      Segal, S. J., "Trends in Population and Contraception," Annals
DETD
      of Medicine, 25:51-56, 1993.
      Szarewski, A. and J. Guillebaud, "Contraception," British
DETD
      Medical Journal, 1224-1226.
      50-28-2, 17.beta.-Estradiol, biological studies
                                                       50-50-0, Estradiol
TΤ
                55-63-0, Nitroglycerin 57-63-6, Ethinyl estradiol
     benzoate
57-83-0,
     Progesterone, biological studies
                                        68-23-5, Norethinodrel
                                                                  74-79-3,
     L-Arginine, biological studies 87-33-2, Isosorbide dinitrate
      434-22-0, 19-Nortestosterone 520-85-4, Medroxyprogesterone
```

911-45-5, Clomiphene 2149-70-4 6533-00-2, Norgestrel

```
16051-77-7, Isosorbide mononitrate
                                                           17035-90-4
     nitroprusside
                                      34973-08-5, Gonadorelin
                          20933-81-7
   17230-88-5, Danazol
                                                        54024-22-5,
               35189-28-7, Norgestimate
                                           50903-99-6
      acetate
Desogestrel
                                           74381-53-6, Leuprolide acetate
      57444-72-1
                   60282-87-3, Gestodene
                                     125978-95-2, Nitric oxide synthase
      76932-60-0, Nafarelin acetate
      137361-05-8
        (ovulation control by regulating nitric oxide levels)
    ANSWER 3 OF 9 USPATFULL
       95:105837 USPATFULL
       Ovulation control by regulating nitric oxide levels with arginine
ΤI
       derivatives
       Garfield, Robert E., Friendswood, TX, United States
IN
       Yallampalli, Chandrasekhar, Houston, TX, United States
       Board of Regents, the University of Texas System, Austin, TX, United
PA
       States (U.S. corporation)
PΙ
      US 5470847 19951128
      US 93-165309 19931210 (8)
ΑI
      Utility
EXNAM
      Primary Examiner: Criares, Theodore J.
      Arnold, White & Durkee
LREP
CLMN
      Number of Claims: 19
      Exemplary Claim: 1
ECL
       1 Drawing Figure(s); 1 Drawing Page(s)
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Inhibition of ovulation in a female may be achieved by administering an
       arginine derivative which acts as a nitric oxide sythase inhibitor,
       alone or in combination with one or more of a progestin, an estrogen,
      and an LH-RH antagonist, thereby preventing conception.
SUMM
            . hypothalamus and some progesterone is required for stimulating
      LH-RH. It is on the basis of this concept that the modern
     contraceptive "pill" is designed. Progestins and estrogens in
       the "pill" inhibit the synthesis of LH-RH thus preventing the LH surge
      which.
       Female contraception methods are based upon the above theory
SUMM
      of the control of ovulation. Generally, all contraceptive
      procedures are based upon the principal that high or moderate
      progesterone or estrogen levels inhibit LHRH and the LH surge.
SUMM
      1. Oral contraception.
SUMM
       Potential users of these hormone contraceptives should be
       alerted to the fact that both hormone components may be associated with
       a slightly increased risk of cardiovascular.
      hypercholesterolemia, hypertension, diabetes, heavy smoking, or a
family
      history of early coronary disease may augment the risk. Discontinuance
       of oral contraceptives and use of an effective alternative
       should be considered in the management of hypertension or major glucose
       intolerance. Use of.
SUMM
      Absolute contraindications to oral contraceptives include
       thrombotic disorders, known or suspected cancer of an
estrogen-dependent
       organ (e.g., breast or uterus), impaired liver function, pregnancy,
       undiagnosed. . . bleeding, pregnancy-associated jaundice, and
      hyperlipidemia. In many other disorders, a relative contraindication
       should be individually evaluated and use of oral contraceptives
       cautiously explored. Because the frequency of arterial thrombosis
       appears to be increased after elective surgery, it is recommended that
       oral contraceptives be discontinued a month before surgery.
SUMM
               an N.sup.G substituted arginine or arginine ester or an
      N.sup.G, N.sup.G -disubstituted arginine which is administered to a
       female desiring contraception. The arginine analogues of the
```

present invention are preferably of the L-configuration and include any

9034-40-6D, Lh-rh, analogs

9002-67-9, LH

14402-89-2, Sodium

```
pharmaceutically acceptable addition salts as. .
      . . . artificial insemination (AI) and other assisted reproductive
SUMM
      techniques. The inhibition of ovulation will block conception and be
      beneficial as a contraceptive. There is substantial need for
      medical intervention in ovulation control in women who either want to
      raise a family or.
            . ovulation for the purpose of producing offspring or the
DETD
      inhibition of ovulation for the purpose of preventing conception and
      pregnancy (contraception).
      Fathalla, M. F., "Contraception and women's health," British
DETD
      Medical Bulletin, 49(1):245-251, 1993.
      Hannaford, P. C., "Cervical cancer and methods of contraception
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       ," Advances in Contraception, 7:317-324, 1991.
      Jordan, V. C., et al., "The Estrogenic Activity of Synthetic Progestins
DETD
      Used in Oral Contraceptives, " Cancer, 71(4):1501-1505, 1993.
      Segal, S. J., "Trends in Population and Contraception," Annals
DETD
      of Medicine, 25:51-56, 1993.
      Szarewski, A. and J. Guillebaud, "Contraception," British
DETD
      Medical Journal, 1224-1226.
      What is claimed is:
CLM
       1. A method of contraception comprising: administering an
       inhibitor of nitric oxide production selected from the group consisting
      of N.sup.G -nitro-L-arginine methyl ester, N.sup.G -ethyl-L-arginine,.
       9. A method of contraception comprising administering N.sup.G
       -nitro-L-arginine methyl ester to a female in an amount inhibiting
       ovulation.
      10. A method of contraception comprising: administering an
      N.sup.G -substituted arginine or an N.sup.G, N.sup.G -disubstituted
      arginine having a nitro, amino, imino, iminoalkyl, lower alkyl, lower.
       11. A method of contraception comprising: administering an
       inhibitor of nitric oxide production selected from the group consisting
       of N.sup.G -nitro-L-arginine methyl ester, N.sup.G -ethyl-L-arginine,.
      50-28-2, 17.beta.-Estradiol, biological studies
                                                        50-50-0, Estradiol
IT
               55-63-0, Nitroglycerin 57-63-6, Ethinyl estradiol
     benzoate
57-83-0,
      Progesterone, biological studies 68-23-5, Norethinodrel
                                                                  74-79-3,
      L-Arginine, biological studies 87-33-2, Isosorbide dinitrate
      434-22-0, 19-Nortestosterone 520-85-4, Medroxyprogesterone
                           2149-70-4
                                       6533-00-2, Norgestrel
    911-45-5, Clomiphene
                                                   14402-89-2, Sodium
                     9034-40-6D, Lh-rh, analogs
      9002-67-9, LH
                     16051-77-7, Isosorbide mononitrate
                                                           17035-90-4
      nitroprusside
                                      34973-08-5, Gonadorelin
    17230-88-5, Danazol
                         20933-81-7
                                                        54024-22-5,
                                          50903-99-6
               35189-28-7, Norgestimate
Desogestrel
                                          74381-53-6, Leuprolide acetate
      57444-72-1
                   60282-87-3, Gestodene
      76932-60-0, Nafarelin acetate 125978-95-2, Nitric oxide synthase
      137361-05-8
        (ovulation control by regulating nitric oxide levels)
    ANSWER 4 OF 9 HCAPLUS COPYRIGHT 1999 ACS
L11
     1995:795168 HCAPLUS
AN
     123:189355
DN
    Ovulation control by regulating nitric oxide levels
TI
    Garfield, Robert E.; Yallampalli, Chandrasekhar
IN
     Board of Regents, University of Texas System, USA
PΑ
     PCT Int. Appl., 30 pp.
SO
     CODEN: PIXXD2
DΤ
     Patent
     English
LΑ
```

APPLICATION NO. DATE

FAN.CNT 1

PATENT NO.

KIND DATE

```
19950615
                                          WO 94-US14133
                                                            19941208
ΡI
    WO 9515753
                      A1
        W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB,
            GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW,
            NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN
        RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU,
            MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN,
            TD, TG
                                          US 93-165309
                                                            19931210
     US 5470847
                            19951128
                                          AU 95-13041
                                                            19941208
                            19950627
    AU 9513041
                      A1
                                          US 95-477189
                                                            19950607
     US 5643944
                      Α
                            19970701
                                                            19950607
     US 5721278
                      Α
                            19980224
                                          US 95-477187
PRAI US 93-165309
                      19931210
    WO 94-US14133
                     19941208
     Inhibition of ovulation in a female may be achieved by administering a
     nitric oxide synthase inhibitor, alone or in combination with one or more
     of a proqestin, an estrogen, and an LH-RH antagonist, thereby preventing
     conception. The stimulation of ovulation in a female may be achieved by
     administering a nitric oxide source, optionally in further combination
     with one or more of clomiphene, a gonadotropin, and an LH-RH agonist.
     Thus, 27 days old immature rats were injected with 4 IU of pregnant
mare's
     serum gonadotropin on day on. Two days later rats were injected with 40
     mg of NG-nitro-L-arginine Me ester at 12 AM and 3 PM and animals were
     sacrificed one day later and examd. for the ovulatory response by
counting
     the no. of Graafian follicles 3 and corpora lutea 5 in the ovaries.
     no. of Graffian follicles and corpora lutea was 9.7 and 0.7 resp. as
     compared to 1.0 and 10.0 for the controls.
IT
     Contraceptives
     Insemination, artificial
     Ovarian cycle
     Ovulation
     Pituitary gland
        (ovulation control by regulating nitric oxide levels)
     50-28-2, 17.beta.-Estradiol, biological studies 50-50-0, Estradiol
IT
                                                                      57-83-0,
               55-63-0, Nitroglycerin 57-63-6, Ethinyl estradiol
                                        68-23-5, Norethinodrel
                                                                 74-79-3,
     Progesterone, biological studies
     L-Arginine, biological studies
                                    87-33-2, Isosorbide dinitrate
434-22-0,
                         520-85-4, Medroxyprogesterone 911-45-5,
     19-Nortestosterone
     Clomiphene 2149-70-4 6533-00-2, Norgestrel 9002-67-9, LH
                                 14402-89-2, Sodium nitroprusside
     9034-40-6D, Lh-rh, analogs
    16051-77-7, Isosorbide mononitrate 17035-90-4 17230-88-5,
                                                             35189-28-7,
              20933-81-7
                           34973-08-5, Gonadorelin acetate
     Danazol
                                                          57444-72-1
                    50903-99-6
                                 54024-22-5, Desogestrel
    Norgestimate
                            74381-53-6, Leuprolide acetate 76932-60-0,
    60282-87-3, Gestodene
                       125978-95-2, Nitric oxide synthase
                                                            137361-05-8

    Nafarelin acetate

     RL: BAC (Biological activity or effector, except adverse); BIOL
     (Biological study)
        (ovulation control by regulating nitric oxide levels)
    ANSWER 5 OF 9 MEDLINE
L11
     95365286
                 MEDLINE
AN
DN
     95365286
     [Polycystic ovarian dystrophies. Diagnostic criteria and treatment].
TΙ
     Les dystrophies ovariennes polykystiques. Crit`eres diagnostiques et
     traitement.
     Emperauger B; Kuttenn F
ΑU
     Service d'Endocrinologie et Medecine de la Reproduction, Hopital Necker,
CS
     PRESSE MEDICALE, (1995 May 20) 24 (18) 863-8. Ref: 29
so
     Journal code: PMT. ISSN: 0755-4982.
CY
     France
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DT

Journal; Article; (JOURNAL ARTICLE)

```
(REVIEW, TUTORIAL)
LΑ
     French
     Priority Journals; Cancer Journals
FS
ΕM
     199511
     Polycystic ovary syndrome (PCOS) is an association of oligomenorrhoea,
AΒ
     anovulation, hyperandrogenism, obesity and enlarged polycystic ovaries.
Ιt
     provides a model of loss of cyclic ovarian function. It is classical to
     distinguish between type I and type II PCOS. In type I, the primary
     mechanism seems to be hypothalamic dysfunction, which causes an increase
     in the frequency and amplitude of LH pulses, with diminished FSH release.
     LH hypersecretion stimulates ovarian stroma hyperplasia while FSH
     insufficiency results in the failure of folliculare maturation and hence
     anovulation. Aromatization of androgens to oestrogens is responsible for
     permanent oestrogen overproduction, which favours LH hypersecretion. Type
     II PCOS is more frequent and may have multiple causes (local, endocrine,
     systemic, iatrogenic) that interfere with the gonadotropic axis and alter
     the FSH/LH ratio. The most efficient treatment of hirsutism is
cyproterone
     acetate which alone has both antiandrogenic and antigonadotropic
     properties. Clomifene citrate remains the "first choice" treatment of
     infertility associated with anovulation.
CT
     Check Tags: Female; Human
      Clomiphene: TU, therapeutic use
      Contraceptives, Oral, Hormonal: AE, adverse effects
      Cyproterone Acetate: TU, therapeutic use
      Danazol: AE, adverse effects
      Endocrine Diseases: CO, complications
      English.
RN
     17230-88-5 (Danazol); 427-51-0 (Cyproterone Acetate);
     911-45-5 (Clomiphene)
CN
     0 (Contraceptives, Oral, Hormonal)
    ANSWER 6 OF 9 HCAPLUS COPYRIGHT 1999 ACS
L11
     1988:548321 HCAPLUS
AN
DN
     109:148321
    Vitamin B6 treatment of premenstrual syndrome
TI
ΑU
     Brush, M. G.
     Dep. Gynaecol., United Med. Dent. Sch., London, SE1 7EH, UK
CS
     Curr. Top. Nutr. Dis. (1988), 19(Clin. Physiol. Appl. Vitam. B-6), 363-79
SO
     CODEN: CTNDDU; ISSN: 0191-2453
DT
     Journal
LА
     English
    Of .apprx.1500 women referred to a premenstrual syndrome (PMS) clinic,
AB
630
     were subsequently treated with pyridoxine (40-200 mg/day); other drugs
     (antidepressants, oral contraceptives, hormones, etc.) were
     often examd. along with pyridoxine. Responses varied with pyridoxine
     dose. In a sample study of 160 PMS patients, pyridoxine alone at 200
    mg/day gave good results (29 good responses, 25 partial responses, 19 no
     response, 15 responses unknown), as did 150-160 mg/day (6, 7, 0, 6,
     resp.). Pyridoxine at <100 or 100-200 mg/day was not as effective in
     reducing PMS symptoms (depression, etc.). A study with Magnesium OK (50
     mg pyridoxine HCl and 145 mg Mg/tablet, with other vitamins and
minerals),
     given at 2 tablets/day to 50 PMS patients, led to 12 good responses for
     1-2 cycles, 21 good responses for .gtoreq.3 cycles, 4 variable responses,
     and 13 no change.
             women referred to a premenstrual syndrome (PMS) clinic, 630 were
AB
     subsequently treated with pyridoxine (40-200 mg/day); other drugs
     (antidepressants, oral contraceptives, hormones, etc.) were
     often examd. along with pyridoxine. Responses varied with pyridoxine
     dose. In a sample study of 160 PMS. .
IT
     Contraceptives
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General Review; (REVIEW)

(oral, premenstrual syndrome treatment with pyridoxine and) 57-83-0, Progesterone, biological studies IT 7439-95-4, 68-22-4, Norethisterone 152-62-5 Mefenamic acid 25614-03-3, Magnesium, biological studies 17230-88-5, Danazol Bromocriptine RL: BIOL (Biological study) (premenstrual syndrome treatment with pyridoxine and) ANSWER 7 OF 9 HCAPLUS COPYRIGHT 1999 ACS L111984:168449 HCAPLUS AN 100:168449 DN ΤI The effect of sex steroids and hormonal contraceptives upon thymus and spleen of intact female rats Kuhl, H.; Gross, M.; Schneider, M.; Weber, W.; Mehlis, W.; Stegmueller, Ν M.; Taubert, H. D. Abt. Gynaekol. Endokrinol., J. W. Goethe-Univ., Frankfurt/Main, D-6000, CS Fed. Rep. Ger. Contraception (1983), 28(6), 587-601 SO CODEN: CCPTAY; ISSN: 0010-7824 DΤ Journal LA English The effect of chronic treatment of intact adult female rats with sex AΒ steroids and contraceptive prepns. upon the thymus and the spleen was investigated. Daily injections with 10 .mu.g ethinylestradiol [57-63-6], estradiol [50-28-2] or diethylstilbestrol [56-53-1] for 2 wk resulted in a marked but reversible involution of the thymus, but the spleen was not affected. Androgens exerted an effect at a dose of 0.3 mg, and progestogens only when 2 mg were given. When various contraceptive prepns. were injected for 4 wk, there was a total involution of the thymus which persisted even 2 wk after cessation of treatment. The effect appeared to be mainly due to the estrogenic component. Histol. examns. revealed that estrogen treatment alone resulted in a redn. of the cortex and a depletion of lymphocytes. When contraceptive prepns. were administered, the medulla was also reduced, and both cortex and medulla were replaced by reticular and adipose tissue. The estrogen receptors of thymus cytosol showed dissocn. consts. of 0.34-0.49 nM in diestrous rats, progesterone-treated rats and ovariectomized rats, and binding capacities of 6.5-2.6 fmoles/mg protein. Whether the estrogen-induced involution of the rat thymus leads to an impairment of immune responses remains to be shown. The effect of sex steroids and hormonal contraceptives upon TΙ thymus and spleen of intact female rats AB The effect of chronic treatment of intact adult female rats with sex steroids and contraceptive prepns. upon the thymus and the spleen was investigated. Daily injections with 10 .mu.g ethinylestradiol [57-63-6], estradiol [50-28-2] or diethylstilbestrol. . . Androgens exerted an effect at a dose of 0.3 mg, and progestogens only when 2 mg were given. When various contraceptive prepns. were injected for 4 wk, there was a total involution of the thymus which persisted even 2 wk after. . . Histol. examns. revealed that estrogen treatment alone resulted in a redn. of the cortex and a depletion of lymphocytes. When contraceptive prepns. were administered, the medulla was also reduced, and both cortex and medulla were replaced by reticular and adipose tissue.. estrogen contraceptive thymus spleen; sex steroid thymus spleen stTΤ Spleen (histol. and wt. of, oral contraceptives in relation to) IT Thymus gland (involution of, by oral contraceptives, estrogens in relation to) Androgens ΙT Estrogens

Progestogens

Steroids, biological studies

```
RL: BIOL (Biological study)
        (spleen and thymus gland response to, oral contraceptives in
        relation to)
IT
     Contraceptives
        (oral, spleen and thymus gland response to, estrogens in relation to)
     52-76-6
                                  1961-77-9
                                             54024-22-5
IT
              68-22-4 797-63-7
     RL: BIOL (Biological study)
        (spleen and thymus gland response to, estrogens in relation to)
ΙT
              50-28-2, biological studies 56-53-1 57-63-6
     50-23-7
                                  520-85-4 911-45-5
     biological studies
                          58-22-0
                                                        1424-00-6
                 10540-29-1
     2098-66-0
     RL: BIOL (Biological study)
        (spleen and thymus gland response to, oral contraceptives in
        relation to)
L11 ANSWER 8 OF 9 MEDLINE
AN
     84047113
                 MEDLINE
     84047113
DN
     [Non-virilizing hormonal therapy in women with secondary disorders of
TΙ
     sexual responsiveness].
     Nichtvirilisierende Hormontherapie bei sekundar gestorter weiblicher
     Sexualbereitschaft.
ΑU
     Abrahamsson L; Hackl H; Orstam S
     WIENER KLINISCHE WOCHENSCHRIFT, (1983 Jun 24) 95 (13) 455-8.
SO
     Journal code: XOP. ISSN: 0043-5325.
CY
     Austria
     Journal; Article; (JOURNAL ARTICLE)
DT
     German
LΑ
FS
     Priority Journals
     198402
EM
     26 women with secondary disturbance of sexual responsiveness were treated
AB
     mainly with dehydroepiandrosterone preparations. The sexual tonus was
     tested before and after treatment by a sexual score system previously
     described. Urinary 17-ketosteroid and plasma testosterone fractions were
     controlled in 17 patients; these values were, in general, below the
normal
     range before treatment. Treatment was considered to be successful in 17
    patients, while in the remaining 9, who mainly belonged to the group of
     younger patients, no success was achieved. However, the results point out
     that therapeutic success with hormones of low biological activity can be
     expected only after numerous months of treatment. The pattern obtained on
     determination of hormonal parameters usually corresponded to the results
     of treatment.
СТ
    Check Tags: Female; Human; Male
     Adult
     Clomiphene: TU, therapeutic use
      Contraceptives, Oral, Combined: TU, therapeutic use
     Drug Combinations: TU, therapeutic use
      English Abstract
      Estradiol: AA, analogs & derivatives
      Estradiol: TU,.
     1424-00-6 (Mesterolone); 23983-43-9 (dehydroepiandrosterone enanthate);
RN
     50-28-2 (Estradiol); 53-42-9 (Etiocholanolone); 53-43-0 (Prasterone);
     57-85-2 (Testosterone); 6533-00-2 (Norgestrel); 797-63-7
     (Levonorgestrel); 81569-96-2 (Gynodian); 911-45-5
     (Clomiphene)
L11 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 1999 ACS
     1977:37944 HCAPLUS
AN
     86:37944
DN
     GPC diesterase activity in human endometrial secretion. (Its variations
TΙ
     under the action of estrogens, clomiphene citrate, D-norgestrel
     (post-coital and low dose) and intrauterine device (IUD))
    Nicholson, Roberto; Calamera, Juan C.
ΑU
```

Fac. Med., Univ. Buenos Aires, Buenos Aires, Argent.

CS

```
Int. J. Fertil. (1976), 21(3), 177-80
SO
     CODEN: INJFA3
DT
     Journal
LΑ
     English
     Glycerylphosphorylcholine diesterase [9025-85-8] activity was studied in
AB
     human uterine secretions of normal women and in those under treatment for
     sterility or contraception. Endometrial secretions were
     obtained from 78 patients and the material divided into 4 groups: normal
     women; treated with estrogens alone or with clomiphene citrate [
     50-41-9]; treatment with D-norgestrel (I) [797-63-7]
     (daily and postcoital); and patients with IUD Lippes D. The mean conc.
οf
     free choline liberated by the diesterase in the normal group was 777
     .mu.g/mL. Under hormonal treatment an increase of diesterase activity
was
     obsd. Postcoital I decreased the enzymatic activity between 180 to 420
    min. The uninterrupted use of I (30 gammas daily) produced a loss of
    diesterase activity in 80% of cases studied. The use of an IUD (Lippes
D)
    did not modify the enzymatic activity.
     . . diesterase [9025-85-8] activity was studied in human uterine
AB
     secretions of normal women and in those under treatment for sterility or
    contraception. Endometrial secretions were obtained from 78
    patients and the material divided into 4 groups: normal women; treated
    with estrogens alone or with clomiphene citrate [50-41-9];
     treatment with D-norgestrel (I) [797-63-7] (daily and
    postcoital); and patients with IUD Lippes D. The mean conc. of free
    choline liberated by the diesterase in.
ΙT
    Contraceptives
        (intrauterine, glycerylphosphorylcholine diesterase response to, in
        uterus fluids)
IT
     Contraceptives
        (oral, glycerylphosphorylcholine diesterase response to, in uterus
        fluids)
                        152-43-2 797-63-7
     50-41-9
              84-17-3
IT
    RL: BIOL (Biological study)
        (glycerylphosphorylcholine diesterase response to, in uterus fluid)
IT
     9025-85-8
```

RL: BIOL (Biological study)

(of uterus, contraceptives effect on)

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ΑN
     79:210 CA
     Antifertility effect of three new clomiphene analogs on animals
ΤI
ΑÜ
     Basu, Jayasree
     Reprod: Biol. Div., Indian Inst. Exp. Med., Calcutta, India
CS
     Jap. J. Exp. Med. (1973), 43(1), 9-15
SO
     CODEN: JJEMAG
DT
     Journal
     English
LΑ
CC
     1-5 (Pharmacodynamics)
     Orally administered 1-[p-[2-diethylamino)ethoxy]phenyl]-1,2-diphenyl-2-
AΒ
     nitroethylene citrate (EIPW 111) (I) [21708-94-1] (3-4 mg/kg) was an
     effective contraceptive in mice, rats, and rabbits in both precoital and
     postcoital stages whereas 1-[p-[2-(dimethylamino)ethoxy]phenyl]-1,2-
     diphenyl-2-nitroethylene citrate (EIPW 113) (II) [40297-41-4] (3 mg/kg)
     and 1-[p-[2-(diethylamino)ethoxy]phenyl]-1,2-diphenylethylene citrate
     (EIPW 103) (III) [40297-42-5] were not effective. A single oral dose of
     clomiphene citrate (IV) [50-41-9] (3 mg/kg) showed 100% antifertility
     effect in mice only at the preimplantation phase. I had no effect-on,
male
     fertility. I showed estrogenic activity.
     contraceptive oral ethylene deriv; estrogenic hormone ethylene deriv;
ST
     fertility inhibitor ethylene deriv; antifertility clomiphene analog
ΙT
     Contraceptives
        (oral, clomiphene analogs as)
     21708-94-1
TΤ
     RL: BAC (Biological activity or effector, except adverse); BIOL
     (Biological study)
        (contracepive activity of)
     19957-53-0
                  40529-32-6
IT
     RL: BIOL (Biological study)
        (contraceptive activity in reaction to)
IT
     RL: BAC (Biological activity or effector, except adverse); BIOL
     (Biological study)
        (contraceptive activity of, analogs in relation to)
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AN 90:16759 CA

TI Fertility in the rhesus monkey following long-term inhibition of ovarian function with danazol

AU Schane, H. Philip; Anzalone, Anthony J.; Potts, Gordon O.

CS Dep. Endocrinol., Sterling-Winthrop Res. Inst., Rensselaer, N. Y., USA

SO Fertil. Steril. (1978), 29(6), 692-4

CODEN: FESTAS; ISSN: 0015-0282

DT Journal

LA English

CC 2-5 (Hormone Pharmacology)

GΙ

Danazol (I) [17230-88-5] was previously reported to be an oral contraceptive in the rhesus monkey at doses of 200 and 400 mg/monkey/day for 90 days. I was an effective long-term inhibitor of ovarian function in-the-monkey. In the final 3 mo of a 27-mo period of treatment at a

The second secon

dose

of 400 mg/monkey/day, the drug continued to be an effective oral contraceptive. During the 27-mo treatment period, 3 of 7 monkeys were amenorrheic and the remaining had only 16 of the 109 expected menstrual cycles. Following the discontinuation of medication, all 7 monkeys conceived within 2 to 6 wk. One monkey aborted early in pregnancy and

the

remaining 6 delivered normal, healthy infants at term. Thus, following the discontinuation of long-term treatment with I in the monkey, there

was

rapid and complete return of normal ovarian function.

I

ST Danazol oral contraceptive fertility monkey

IT Fertility

(after discontinuation of Danazol as oral contraceptive, in monkey)

IT Macaca mulatta

(fertility after discontinuation of Danazol as oral contraceptive in)

IT 17230-88-5

RL: BIOL (Biological study)

(as oral contraceptive, fertility after discontinuation of, in monkey)

```
90:151974 CA
ΑN
     2-Phenyl-3-aroylbenzothiophenes useful as antifertility agents
ΤI
    Jones, Charles David; Suarez, Tulio
IN
    Lilly, Eli, and Co., USA
PA
so
     U.S., 22 pp.
     CODEN: USXXAM
DT
     Patent
LΑ
    English
IC
     C07D409-10
     260326550A
     27-9 (Heterocyclic Compounds (One Hetero Atom))
FAN.CNT 2
                                          APPLICATION NO.
     PATENT NO.
                     KIND DATE
                                                           DATE
                                           -----
     _____
                     ____
                           _____
                                                           _____
                                          US 1976-724203
                                                            19760917
    US 4133814
                      Α
                           19790109
                                                            19761008
                                          JP 1976-121787
     JP 52053851
                      A2
                           19770430
     JP 61000343
                      В4
                           19860108
                                          HU 1976-EI707
                                                            19761015
    HU 21379
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                           19811128
    HU 179012
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                           19820828
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                                          CA 1976-263844
                                          ES 1976-452695
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                      Α1
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    ES 452694
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                                          GB 1976-44188
                                                            19761025
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                      Α
                           19800702
    AU 7619005
                      A1 19780504
                                          AU 1976-19005
                                                            19761026
     SU 764610
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                           19800915
                                          SU 1976-2414462
                                                           19761026
                                                            19761026
     RO 70769
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                           19821026
                                          RO 1976-88224
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                                                            19761027
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                      Α
                           19770429
     DK 152045
                      В
                           19880125
     DK 152045
                      С
                           19880620
     SE 7611955
                      Α
                           19770429
                                           SE 1976-11955
                                                            19761027
     SE 426945
                      В
                           19830221
     SE 426945
                      С
                           19830602
                                           ZA 1976-6440
                                                            19761027
     ZA 7606440
                      A
                           19780628
                                                            19761027
     PL 107979
                      B1
                           19800331
                                          PL 1976-193308
     IL 50773
                      A1
                           19800331
                                          IL 1976-50773
                                                            19761027
                                                            19761027
     PL 114190
                      B1
                           19810131
                                          PL 1976-212113
                                                            19761027
     CH 635336
                      Α
                           19830331
                                          CH 1976-13556
                                                           19761028
     BE 847719
                      A1
                           19770428
                                          BE 1976-1007725
                                                            19761028
                      Α
                           19770502
                                          NL 1976-11975
    NL 7611975
                                                            19761028
     FR 2329271
                      A1
                           19770527
                                          FR 1976-32514
     FR 2329271
                      В1
                           19790727
                                          DD 1976-195508
                                                            19761028
     DD 127461
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                                          AT 1976-8008
                                                            19761028
    AT 7608008
                      Α
                           19791215
    AT 357520
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                           19800710
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     CS 205046
                      Ρ
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     CH 635582
                      Α
                           19830415
                                          CH 1982-139
                                                            19820111
     CH 634316
                      Α
                           19830131
                                          CH 1982-255
                                                            19820114
                           19850613
                                          DK 1985-2658
                                                            19850613
     DK 8502658
                           19751028
PRAI US 1975-626010
     CH 1976-13556
                           19761027
     DK 1976-4848
                           19761027
GΙ
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R^2
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Ι

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3-Benzoylthiophenes I [R = OH; R1 = H, OH, alkoxy, OCH2CH2NR3R4 (R3 and
AB
R4
     are independently alkyl or NR3R4 = pyrrolidino, piperidino,
     hexamethylenimino, morpholino); R2 = H] and acid addn. salts of I (R1 =
     OCH2CH2NR3R4) exhibited antifertility and anti-tumor activity and were
     prepd. by benzoylation of 2-phenylbenzothiophenes. PhCOCH2Br, PhSH, and
     pyridine was refluxed 6 h, the PhCOCH2SPh obtained was heated with
     polyphosphoric acid to yield 2-phenylbenzothiophene, and acylation of the
     product by 4-MeOC6H4COC1 and AlC13 gave I (R = R1 = H, R2 = OMe).
     contraceptive benzoylphenylbenzothiophene prepn; benzothiophene benzoyl
ST
     prepn antifertility; tumor benzoylphenylbenzothiophene prepn
     Contraceptives
ΙT
     Neoplasm inhibitors
        (2-phenyl-3-benzoylbenzothiophenes)
                                     2674-04-6
               100-66-3, reactions
IT
     RL: RCT (Reactant)
        (acylation by benzothiophenecarbonyl chloride deriv.)
IT
     98-88-4
     RL: RCT (Reactant)
        (acylation of benzothiophene deriv. by)
ΙT
     100-07-2
                63675-91-2
     RL: RCT (Reactant)
        (acylation of benzothiophenes by)
                                             69731-97-1
                                                          69923-40-6
                  69731-95-9 69731-96-0
IT
     69731-94-8
     RL: RCT (Reactant)
        (antifertility activity of)
ΙT
     63675-90-1
     RL: RCT (Reactant)
        (conversion to acid chlorides, for acylation of benzothiophene deriv.)
IT
     79-37-8
     RL: RCT (Reactant)
        (cyclocondensation reaction with thiophenol deriv.)
ΙT
     27884-09-9P
                   63676-23-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and acylation of, by benzoyl chloride deriv.)
IT
     63676-27-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and acylation of, by benzoyl chloride derivs.)
     1207-95-0P
                  63675-74-1P
IT
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and acylation of, by benzoyl chlorides)
ΙT
     63676-25-5P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and anti-tumor activity of)
                                                63675-84-3P
                                                              63675-86-5P
IT
     63675-76-3P
                   63675-82-1P
                                 63675-83-2P
                                                63675-98-9P
                                                              63675-99-0P
     63675-88-7P
                   63675-93-4P
                                 63675-95-6P
                                                63676-12-0P
                                                              63676-21-1P
                                 63676-11-9P
     63676-00-6P
                   63676-03-9P
                                 63712-61-8P
     63676-28-8P
                   63712-59-4P
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RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and a fertility activity of) 63676-07-3P 63676-09-5P 63676-13-1P
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and antifertility and anti-tumor activity of)
                                                 63675-73-0P
                   21875-72-9P
                                  33192-00-6P
ΙT
     16222-10-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and cyclization of, isomerization in)
IT
     63675-78-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and cyclocondensation reaction of, decarboxylation in)
ΙT
     63676-24-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and deprotection of)
ΙT
     69862-12-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and oxidative elimination reaction of)
ΙT
     63675-79-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and reaction of, with thionyl chloride)
IT
     63675-77-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and ring cleavage of, by chloroacetic acid deriv.)
ΙT
     63675-89-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and sapon. of)
                    63676-19-7P
IT
     63676-04-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and O-alkylation of, by aminoethyl chloride deriv.)
ΙT
     63675-97-8P
                    63676-05-1P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and O-alkylation of, by aminoethyl chlorides)
     63676-22-2P
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. and O-protection of)
ΙT
     63675-75-2P
                    63675-81-0P
                                   63675-85-4P
                                                 63675-87-6P
                                                                63675-92-3P
                                   63676-01-7P
                                                 63676-06-2P
                                                                63676-20-0P
     63675-94-5P
                    63675-96-7P
                    63712-60-7P
                                   69731-93-7P
     63676-26-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of)
ΙT
     63675-80-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, and acylation of benzenes by)
IT
     63675-90-1P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, and acylation of benzothiophene deriv. by)
ΙT
     4755-72-0
     RL: RCT (Reactant)
        (ring cleavage of dioxodihydrobenzothiophene deriv. by)
     108-98-5, reactions
ΙT
     RL: RCT (Reactant)
        (substitution reaction of, with phenacyl bromides)
IT
     15570-12-4
     RL: RCT (Reactant)
        (substitution reaction with phenethyl bromide deriv.)
               536-38-9
IT
     70-11-1
     RL: RCT (Reactant)
        (substitution reaction with thiophenol)
TT
     2632-13-5
     RL: RCT (Reactant)
        (substitution reaction with thiophenols)
     99-76-3
ΙT
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RL: RCT (Reactant)

(O-alkylation 2205-31-4 5050-41-9

RL: RCT (Reactant)
(O-alkylation of (hydroxybenzoyl)benzothiophene deriv. by)

IT 100-35-6
RL: RCT (Reactant)
(O-alkylation of (hydroxyphenyl)benzothiophene deriv. by)

IT 7250-67-1
RL: RCT (Reactant)
(O-alkylation of hydroxybenzoate deriv. by)